material was said to be used, corrosion problems *continued* to be present at least as late as 1952, as shown by the *reddish* color of the urea product it produced.[4] The evidence indicated that that problem was *still* not solved *as late as March 1953* (DX 70, App. 1410-1411; Katzen, App. 716-717).

But the method of Respondent's patent *did* solve the problem, and—

The Invention Is Now Widely Used

The impact of the van Waes discovery upon the urea-manufacturing chemical industry was "manifest," as the Court of Appeals correctly observed (Petition, page 20a). With the patenting of the van Waes invention (in December of 1955),[5] the prior processes for producing urea were all outmoded. The vast majority of the urea now produced throughout the world is made in stainless steel reactors protected against corrosion by the presence of oxygen as taught in the van Waes patent in suit.[6]

---

[4] The reddish color coming from the dissolved iron resulting from the corrosion of the reactor liner (Katzen, App. 710-711). Such iron-contaminated urea is *unsalable* as such, and the plant in Switzerland had to include extensive purification apparatus. (Katzen, App. 708-709).

[5] The patent now has scarcely two years left before it expires.

[6] Much of it under the widely-granted licenses of the Respondent. See Finding 13, Petition page 8a. A few of the older silver-lined reactors are still in existence, such as one operated by E. I. DuPont, de Nemours Corporation, and Petitioner's own witness Cook characterized that plant needing "modernization" and "rehabilitation." (App. 517).

Both Courts Below Followed Correct Legal Principles, the Court of Appeals Independently Reviewing the Evidence.

The District Court found as a fact, supported by very substantial evidence, and the Fifth Circuit Court of Appeals unanimously agreed, that the van Waes discovery of the corrosion-controlling effectiveness of the oxygen addition to the urea synthesis was, in view of this state of the art, clearly *unobvious* to a person of only ordinary skill in the art at the time the invention was made. These findings were all made in accordance with the provisions for considering the legal question of validity under 35 USC 102, 103, and in *strict obedience* to the judicial approach to the matter as defined by the Court in *Graham* v. *John Deere*, 383 U.S. 1 (1966). See, e.g., the District Court's Findings of Fact 8-11, 16-26, Petition pages 6a-11a; the District Court's Conclusions of Law, 18-30, Petition pages 14a-17a. Observe also the recognition by the Fifth Circuit Court of Appeals that the District Court had "followed these procedures" as laid down in *Graham* v. *John Deere, supra*, see Petition page 30a.

Further, this case does not reach this Court from a casual or off-hand affirmance by the Fifth Circuit Court of Appeals of the Trial Court's ruling. Rather, the Appellate Court made its *own* "examination of the record and the findings and conclusions" (Petition page 25a), and *itself* examined the prior art documentary evidence "*de hors* the clearly erroneous rule" (Petition page 27a)—before reaching its *own independent* holding that the Trial Court's upholding the validity of the patent in suit was clearly "correct" (Petition page 28a).

Its *own* examination of the record in this case also led to the observations by the Fifth Circuit Court of

Appeals that "the record evidence to support every finding [by the Trial Court] is *apparent.*" (Petition, page 29a); that there was "*nothing in the record which undercuts* the actual determinations on which the District Court decided obviousness." (Petition page 30a); and, after its own *independent* study of both the documentary and testimonial evidence, the Court of Appeals found ". . . we are left with *no real basis* for holding that the prior art would compel the conclusions that it was obvious to add oxygen to the manufacture of urea to prevent the corrosion of stainless steel." (Petition, page 31a).

This is, then, simply a case in which the evidence demonstrated emphatically that, while urea had been known as a chemical compound since about 1836, and its possible synthesis from the simple raw materials of ammonia gas and carbon dioxide gas had been known from about 1870, it was not until the van Waes invention as of April 15, 1953 that there was a disclosure of the process for its economical, commercial manufacture in stainless steel high pressure reaction vessels.

Petitioner's Proposition of "Obviousness" Is Wholly Unsupported; the Affirmative Evidence Is to the Contrary.

Your Petitioner would have this Court believe that, nonetheless, the invention of the patent in suit was "obvious" to a person of only ordinary skill in the art (35 USC 103) because of knowledge in the literature that oxygen or an oxidizing agent had been used to "passivate" stainless steels in *other* chemical processes. The Petition does not reveal, however, that that *same* theory of passivation was discovered *even before the discovery of urea*—having been observed by *none other than* Michael Farraday in the 1820's.

Thus, *all* the knowledge upon which Petitioner relies to assert "obviousness" of the patent in suit was avail-

able for over a century, certainly for at least eighty (80) years, before the van Waes discovery—yet in *all* that time, despite the clear need for a solution to the problem, *not a single person* taught the art how the corrosion of stainless steel in the urea synthesis reaction could be overcome by the *seemingly* simple expedient (as it appears by hindsight) by adding oxygen to the system.

In all of Petitioner's prior art literature and patent references referring to a "passivation" of stainless steels by use of an oxidizing agent, *there is no reference whatsoever to the urea reaction.*

By contrast, in all the prior art references referring to the manufacture of urea, in a stainless steel reactor *or not,* there is *no mention of the utilization of oxygen as the corrosion controlling agent which, alone, would avoid corrosion.*

Further, while Petitioner attacks the expertise of the numerous witnesses (*all* of whom were *directly* involved in urea manufacturing plant design and operation) who testified truly as to their own "surprise" at learning of the effectiveness of mere oxygen to overcome the exceptional urea corrosion problem when they first encountered the van Waes technique, Petitioner fails to state that the *only* witnesses who denied being "surprised" were its own, exceptionally partisan "experts," some of whom *had never had any experience whatsoever with the urea corrosion problem and its extreme severity.* (App. 316, 338).[7]

---

[7] Observe here the District Court's Finding of Fact 22 that "Oxygen is a relatively *mild* oxidizing agent and the [urea] synthesis environment is *extremely* corrosive" and that at the elevated reaction temperatures involved, "the corrosion phenomenon is known to *intensify* . . ."—a Finding expressly considered and sustained by the Court of Appeals (Petition, pages 27a-28a).

All of Petitioner's present contentions on this point were exhaustively argued to both Courts below. *Not one* of the four judges who looked to the record itself found Petitioner's arguments to be supported by the evidence.

For instance, Petitioner repeatedly refers to the work of one Rosenbloom who claimed to have known of the use of oxygen to minimize corrosion in other (*not* urea) chemical processes before the critical date of the patent in suit (Petition, pages 6-7, 11).[8]

However, Petitioner does *not* tell this Court that Rosenbloom's employer, the Chemical Construction Company, had itself built four of the unsatisfactory, expensive *silver*-lined urea manufacturing plants in the years *just before* the van Waes patent was published. It had *never* used stainless steel (See *Stipulated* Fact 6J, Petition page 4a)—even though it was then in full possession of all of Rosenbloom's purported knowledge (App. 995). Significantly, *after* the van Waes patent was published, the Chemical Construction Company built *only one more* silver-lined urea plant. Immediately thereafter *all* of its plants *were* built with stainless steel reactors, and oxygen was used to control the corrosion problem as taught in the van Waes patent in suit. This circumstance, established by uncontradicted evidence, demonstrates that Petitioner's pure speculation as to what "would have been obvious" to Rosenbloom for a urea plant (Petition page 11) is utterly inconsistent with the actual proven conduct of

[8] Rosenbloom's work, with ammonium sulfate, was also all unpublished and maintained confidential by his employer.

both Rosenbloom and his employer, the Chemical Construction Company.[9].

Respondent's First Question thus raises no issue for this Court because *this is not a case* where the evidence established the premise that it was "obvious to try" the invention. If such evidence were present, no one would urge it would not have probative value on the question of "obviousness"—and certainly neither Court below held otherwise. (Cf. Conclusions of Law 20-25, Petition, pages 15a-16a).

COUNTER ARGUMENT TO PETITIONER'S SECOND QUESTION

Petitioner's Second Question fails to present any issue requiring resolution by this Court because even if the evidentiary ruling by *both* Courts below should have been otherwise, Petitioner does not show that the outcome of this case would be any different than it was.

Petitioner identifies only seven articles of PX 60 as the documents it questions (Petition page 7). All were *acknowledged* to be true copies of *authentic* prior art publications,[10] and all were offered to show the state of

---

[9] Petitioner's statement that "neither the District Court nor the Court of Appeals *specifically* dealt with this evidence" is merely [illegible] (Cf. Petition page 26a) and is true only in the

Add to Footnote 10:

By letter to the Clerk of the Court, dated September 23, 1970, Petitioner proposes to "correct" dates at Petition page 12 from "July 22 to October 1959" to "July 1922 to October 1959". These "corrected" dates remain inaccurate as to PX 60. Petitioner has still confused the dates of PX 60 with the dates of the publications in PX 61. However, PX 61 is nowhere referred to in the Petition, wherein the "Second Question" is based solely upon an alleged error of admissibility as to PX 60.

the art as revealed by the published literature (App. 804-808). The "state of the art" here in question was the literature referring to the use of silver-lined reaction vessels *generally* in chemical reactions—all having *nothing* to do with urea.[11]

Neither Court below indicated any reliance upon any of these documents in reaching its result. In Appellant's Brief to the Fifth Circuit, Petitioner asserted the "*only* apparent effect" of such documents would be to refute the notion that certain work carried out in silver-lined apparatus by one Keating, and published without disclosing the nature of the chemical reaction, was in fact done with urea (Appellant's Brief, page 43).

But neither Court held that Keating's work was not done with urea.

The District Court simply held Keating's urea process had never used a stainless steel reactor or (as Clark himself *admitted*: "We had *not* done it", See App. 1058-1059). Although Keating had done certain *secret* "downstream" work with a stainless steel pipe and valve, that work was *all* "consciously and deliberately concealed" (Finding 26, Petition 10a-11a; Clark, App. 1070-1071).

---

[11] This was one of those peripheral issues which so frequently crop up in complicated litigation. The matter was of moment only because Petitioner's witness Clark deposed in England on the eve of the trial, had said he was "surprised" at literature dated in 1957 advocating silver apparatus for certain non-urea uses. He invited an inquiry to determine whether such literature existed in the 1940's. PX. 60 was then assembled by Respondent in the few weeks between the date of that deposition and the trial, and the articles therein were offered to show that, as early as 1939, photographs of silver equipment for non-urea uses almost identical to the photographs of the 1957 article had appeared in the literature. This was only significant to show that an article describing silver apparatus, but not specifying a particular chemical reaction, could not be assumed to relate to urea manufacture.

The Court of Appeals said they too would "assume" Keating had actually worked with urea, but held that even under *that* assumption the evidence of Keating's work did *not* make the van Waes invention obvious (Petition page 32a).

Thus the supposedly improperly received prior art publications (PX 60), involved in Petitioner's Second Question, had no controlling effect on the rulings of either Court below. Petitioner is at best arguing an error in the abstract and even *assuming* an "error", has failed to demonstrate any *harmful* error by either Court in this case.

Moreover, it is clear that the Court of Appeals properly ruled on this alleged "error" when it was vigorously pressed before that Court. See Petition page 33a-34a. Again no unusual legal principle is involved. Such rulings (that the patentee may offer evidence of the state of the prior art *literature* in the same manner as the infringer) are common. See *Ludlum Steel Co. v. Terry*, 37 F. 2d 153 at 157 (D.N.Y. 1928); *Watson v. Heil*, 192 F. 2d 982, 984, 985 (4 Cir. 1951), which *reversed* where such offer of prior art had been *excluded;* and see *In re Fournet*, 356 F. 2d 392, at 395 (C.C.P.A. 1966): ". . . we regard the use of prior art teachings under 35 USC 103 as a two-way street available to both parties."[12]

Petitioner's Second Question is thus of no significant import. This is simply another case in which the defendant infringer sought to exclude full evidence of the prior art when patentee seeks to offer such evidence.

---

[12] Nothing in the Decision of the Court of Appeals below is contrary to *Seymour* v. *McCormack*, 60 US 96 (1856). *Seymour* involves no issue of the patentee offering evidence of prior art, and no issue of alleged improper "impeachment" of a witness. None of Petitioner's other cases (Petition, page 13) have anything whatsoever to do with evidence of "prior art in a patent case".

But if the patentee can raise such fear of full evidence of the state of the prior art in the mind of the infringer, then surely it is a strong and valid patent that is in litigation.

CONCLUSION

Neither Question presented by Petitioner raises an issue involving a conflict between circuits nor any novel development or extension of the law. Petitioner shows neither that if the Questions were each answered in the affirmative there would be a different result in *this* case, nor that there would be any resolution of an important, difficult, or disputed question of controlling law.

The Petition should be denied.

Respectfully submitted,

CARL G. LOVE
Attorney for Respondent
Stamicarbon, N.V.
American Security Building
730 Fifteenth Street, N. W.
Washington, D. C. 20005.

Of Counsel:

GEORGE M. SIRILLA
DONALD J. BIRD
CUSHMAN, DARBY & CUSHMAN
American Security Building
730 Fifteenth Street, N. W.
Washington, D. C. 20005

VICTOR M. CAWTHON
KEEN, O'KELLEY & SPITZ
1205 Universal Marion Bldg.
Jacksonville, Florida 32201

September 25, 1970